ABSTRACT

A solid freeform fabrication method and apparatus for making objects in a layer by layer manner in which the objects have special geometrical features requiring specialized control parameters. The method and apparatus automatically determines and selects the build parameters for the build process based on automatic part feature

5 recognition. A general build style is first determined having a plurality of default parameters for building the object. Data representing the object is imported and oriented with a Z-axis. The data is then processed by slicing software that automatically identifies special build types for specific ranges of Z-values and selects the alternative parameters needed to successfully build these features.   Preferably a look-up table

10 contains special sets of values for the parameters for each special build type possible in which the slicing algorithm can select from. During slicing, operator intervention is not needed to prepare all the parameters necessary for a successful build.